

Title (en)

Brake with multiple disks in an oil bath with dual separate actuation systems for normal and emergency braking arranged inside the axle, particularly for earth-moving farm machines and the like

Title (de)

Im Ölbad laufende, mit zwei getrennten Betätigungssystemen für Not- und normale Bremsung ausgerüstete Mehrscheibenbremse, die im Inneren einer Achse angeordnet ist, insbesondere für landwirtschaftliche Erdbewegungsmaschinen und dergleichen

Title (fr)

Frein multi-disque à bain d'huile avec deux systèmes d'actionnement séparés pour freinage normal et d'urgence disposé à l'intérieur d'un axe, en particulier pour engins agricoles de terrassement et similaires

Publication

EP 0684402 B1 20000419 (EN)

Application

EP 95107348 A 19950515

Priority

IT MI940373 U 19940520

Abstract (en)

[origin: EP0684402A1] A brake with multiple disks in an oil bath for earth-moving machines and the like, of the type having a fluid actuation system for normal braking and a mechanical, hydraulically-opened actuation system for the parking braking system and a pusher disk (4) for the disks (3), which comprises, inside the axle (1) and coaxially to the disks (3) and to the pusher disk (4), a dual actuation device which is constituted by two annular pistons (5-6) which are concentric and coaxial with respect to the pusher disk (4); the outermost piston (5), provided for parking braking, is kept closed against the pusher disk (4) by cup-shaped springs (8-8a) or the like by virtue of a conventional mechanical device, and is opened by means of pressurized oil; the inner annular piston (6) for normal braking is instead actuated by pressurized oil fed through a channel (15) that passes through the outer piston (5); at least two sealing gaskets (9-9a;10-10a) and at least one vent (11-11a) are provided on the outer cylindrical surfaces of the outer piston (5), the vent being interposed between a pair of outer gaskets (9-9a,10-10a) for conveying outward any oil leaks; at least one vent (11-11a) is located so as to coincide with the channel (15) that passes through the outer piston (5) so as to allow to feed pressurized oil to the piston (6) for normal braking.

IPC 1-7

F16D 55/36; **F16D 65/16**

IPC 8 full level

F16D 55/36 (2006.01); **F16D 59/02** (2006.01); **F16D 65/14** (2006.01); **F16D 65/16** (2006.01); **F16D 55/00** (2006.01)

CPC (source: EP)

F16D 55/36 (2013.01); **F16D 59/02** (2013.01); **F16D 65/186** (2013.01); **F16D 2055/0058** (2013.01); **F16D 2121/02** (2013.01); **F16D 2121/12** (2013.01); **F16D 2123/00** (2013.01)

Cited by

CN114576289A; CN105156518A; KR100325382B1; US7980365B2; WO2009059720A1

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

EP 0684402 A1 19951129; **EP 0684402 B1 20000419**; DE 69516330 D1 20000525; DE 69516330 T2 20001123; IT 233443 Y1 20000128; IT MI940373 U1 19951120; IT MI940373 V0 19940520

DOCDB simple family (application)

EP 95107348 A 19950515; DE 69516330 T 19950515; IT MI940373 U 19940520